

ENTROPY CODING

ABSTRACT

5 A method, an apparatus (100) and a computer program product for entropy coding of discrete wavelet transform (DWT) coefficient bits that are arranged into code blocks and coded in bitplane order using three coding passes for each bitplane are disclosed. In the method, transform coefficients of a code block (200) in sign-magnitude form are pre-
10 analyzed. Statistical data about the coefficients is stored, preferably with the coefficients. Significance state data (330), coded data (340), magnitude refinement data (350), bit data (310), and sign data (320) for the code block are buffered. More preferably, the buffering is implemented using a FIFO (120, 1130), located between a context generation module (110, 1120) and an arithmetic coder (130, 1150). Based upon the statistical data, at least
15 one command for at least one sequence of bit and context pairs is generated for arithmetic encoding.